ATO

www.atorelays.com



# Relay Product Catalog

To be the Leading Relay Solution Provider

# About ATO

ATO has more than 15 years of manufacturing experience. We offer different types of relays, such as solid state relays (SSR), electromagnetic relays (EMR), signal relays, thermal overload relays, timer relays and other relay accessories.Our relays are widely used in industry energy fields, power control, electric vehicles and charging sets, lighting control, smart meters, traffic, home appliances, medical treatment and other fields.

## Professional Relay Manufacturer & Seller

- OEM available
- Proofing available
- Products all over the world

# Contents

## Solid State Relay



## Electromagnetic Relay



## Signal Relay



## Timer Relay



## Thermal Overload Relay



## Monitoring Relay

# Single-Phase SSR

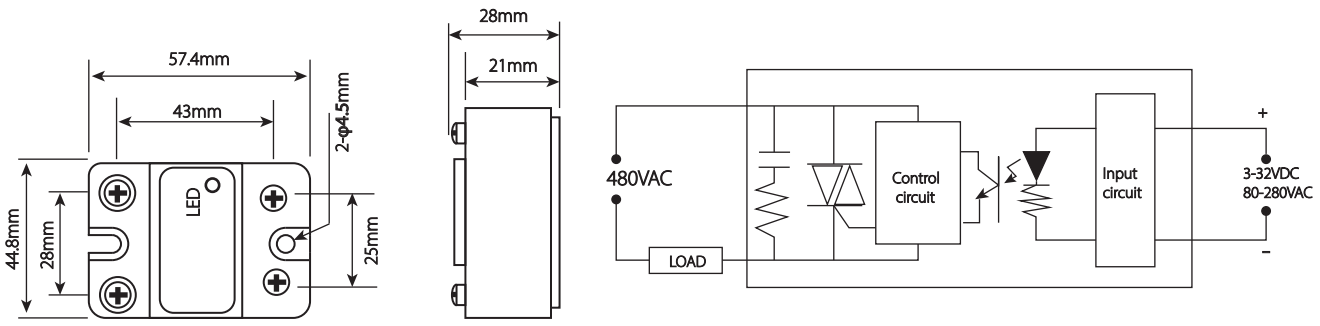
## Feature:

* No contact, no sparks, no arcs, reducing safety hazards such as burning, metal melting, and splashing caused by arcs.
* No noise, no mechanical action, quiet and smooth operation.
* The shell is made of high-quality high-temperature flame-retardant materials, and the transparent cover ensures safe contact.

## SPECIFICATION

| TYPE | ATO-SSR-DHDA | ATO-SSR-DHAA |
|---|---|---|
| **INPUT** | | |
| Control voltage range | 3-32VDC | 70-280VAC |
| Control current | 12mA | 15mA |
| Min.switch-on voltage | 2.8VDC | 70VAC |
| Min.switch-off voltage | 1.5VDC | 50VAC |
| **OUTPUT** | | |
| Load voltage range | 24-480VAC | |
| Peak voltage | 800V | |
| Max.load current | 10A,15A,20A,25A,40A,60A,75A,80A,90A,100A,120A | |
| Leakage current when off | 2mA | |
| Pressure drop when On | 1.5V | |
| **GENERAL** | | |
| L-W-H(mm) | 57.4*44.8*28 | |
| Weight | 100g | |
| Dielectric strength | 2500V | |
| Operating temperature | -20℃~80℃ | |
| Certification | CE | |

## DIMENSION & WIRING




## PRECAUTIONS

1. When the load is working, it is necessary to add enough radiators or take other effective heat dissipation measures.
2. The bottom of the relay needs to be coated with heat-dissipating silicone grease so that it can be tightly combined with the radiator.
3. The terminal and the load line must be tightly connected. The recommended installation torque for M4 screws is 0.98~1.37N m, and the installation torque for M3 screws is 0.58~0.98N m.
4. Random and enhanced solid state relays need to be customized, please consult our company for details.

# Three-Phase SSR

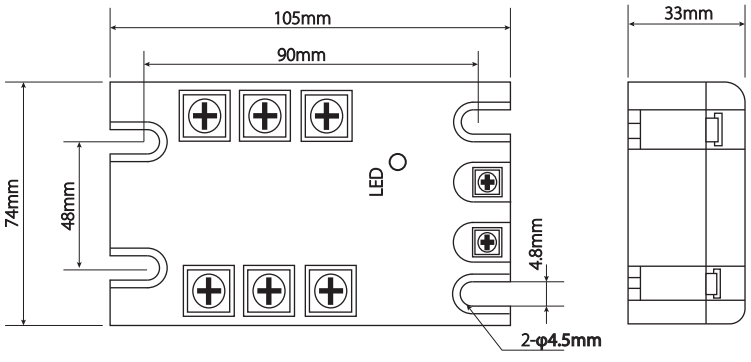
## Feature:

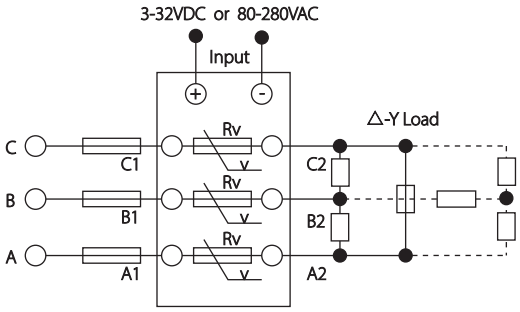
* No contact, no sparks, no arcs, reducing safety hazards such as burning, metal melting, and splashing caused by arcs.
* No noise, no mechanical action, quiet and smooth operation.
* The shell is made of high-quality high-temperature flame-retardant materials, and the transparent cover ensures safe contact.

## SPECIFICATION

| TYPE | ATO-SSR-THDA | ATO-SSR-THAA |
|---|---|---|
| **INPUT** | | |
| Control voltage range | 3-32VDC | 70-280VAC |
| Control current | 40mA | 15mA |
| Min.switch-on voltage | 4VDC | 70VAC |
| Min.switch-off voltage | 2.7VDC | 50VAC |
| **OUTPUT** | | |
| Load voltage range | 24-480VAC | |
| Peak voltage | 1000V | |
| Max.load current | 10A,15A,20A,25A,40A,60A,75A,80A,90A,100A,120A | |
| Leakage current when off | ⩽8mA | |
| Pressure drop when On | 1.5V | |
| **GENERAL** | | |
| L-W-H(mm) | 105*74*33 | |
| Weight | 500g | |
| Dielectric strength | 2500V | |
| Operating temperature | -20℃~80℃ | |
| Certification | CE | |

## DIMENSION & WIRING




## PRECAUTIONS

1. When the load is working, it is necessary to add enough radiators or take other effective heat dissipation measures.
2. The bottom of the relay needs to be coated with heat-dissipating silicone grease so that it can be tightly combined with the radiator.
3. The terminal and the load line must be tightly connected. The recommended installation torque for M4 screws is 0.98~1.37N m, and the installation torque for M3 screws is 0.58~0.98N m.
4. Random and enhanced solid state relays need to be customized, please consult our company for details.

# Industrial Single-Phase SSR

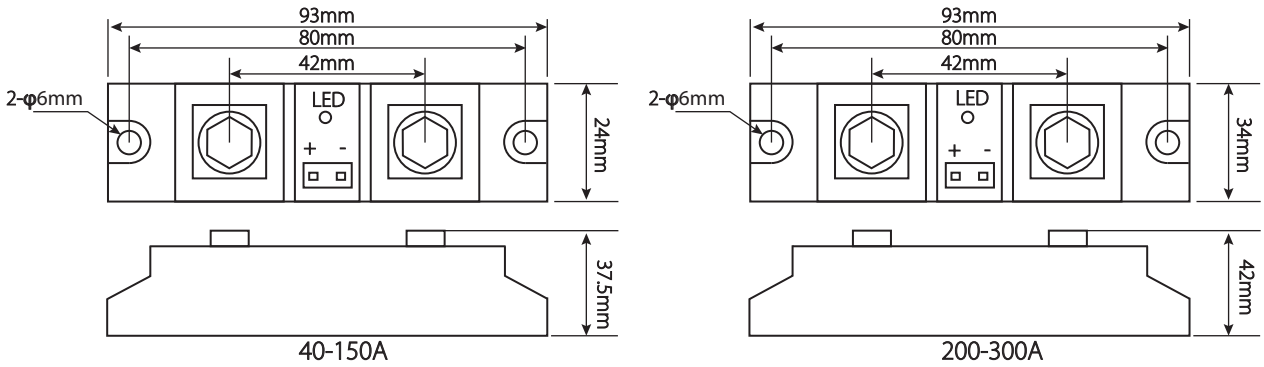
## Feature:

* No contact, no sparks, no arcs, reducing safety hazards such as burning, metal melting, and splashing caused by arcs.
* No noise, no mechanical action, quiet and smooth operation.
* The shell is made of high-quality high-temperature flame-retardant materials, and the transparent cover ensures safe contact.

## SPECIFICATION

| TYPE | ATO-GYSSR-DA | ATO-GYSSR-DA |
|---|---|---|
| **INPUT** | | |
| Control voltage range | 3-32VDC | 70-280VAC |
| Control current | 12mA | 15mA |
| Min.switch-on voltage | 4.5VDC | 70VAC |
| Min.switch-off voltage | 3VDC | 50VAC |
| **OUTPUT** | | |
| Load voltage range | 24-480VAC | |
| Peak voltage | 800V | |
| Max.load current | 40A,60A,80A,100A,120A,150A,200A,250,290A,300A,400A,500A | |
| Leakage current when off | ⩽4mA | |
| Pressure drop when On | 2.5V | |
| **GENERAL** | | |
| L-W-H(mm) | 94*25*38 | 94*34*42 |
| Weight | 130g | 210g |
| Dielectric strength | 2500V | |
| Operating temperature | -20℃~80℃ | |
| Certification | CE | |

## DIMENSION




## PRECAUTIONS

1. When the load is working, it is necessary to add enough radiators or take other effective heat dissipation measures.
2. The bottom of the relay needs to be coated with heat-dissipating silicone grease so that it can be tightly combined with the radiator.
3. The terminal and the load line must be tightly connected. The recommended installation torque for M4 screws is 0.98~1.37N m, and the installation torque for M3 screws is 0.58~0.98N m.
4. Random and enhanced solid state relays need to be customized, please consult our company for details.

# DIN Rail Mount 1-Phase SSR

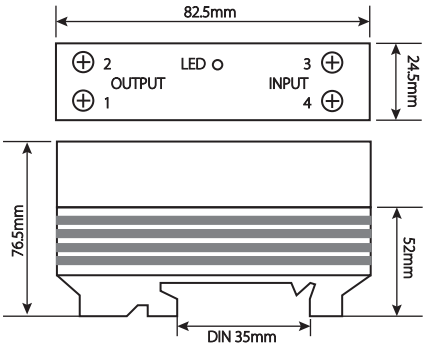
## Feature:

* No contact, no spark, no arc, reducing safety hazards.
* No noise, no mechanical action, quiet and smooth operation.
* Made of high quality high temperature resistant flame retardant material.
* Universal DIN buckle + independent cooling module.

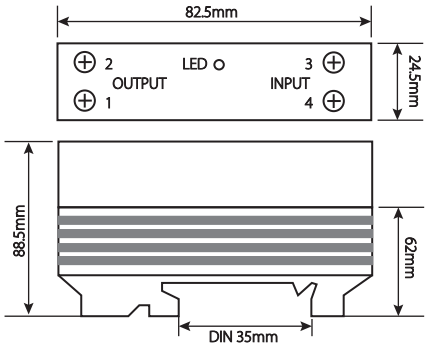
## SPECIFICATION

| TYPE | ATO-SSR-DSDD | ATO-SSR-DSDA | ATO-SSR-DSAA |
|---|---|---|---|
| **INPUT** | | | |
| Control voltage range | 3-32VDC | 3-32VDC | 70-280VAC |
| Control current | 12mA | 12mA | 15mA |
| Min.switch-on voltage | 2.8VDC | 2.8VDC | 70VAC |
| Min.switch-off voltage | 1.5VDC | 1.5VDC | 50VAC |
| **OUTPUT** | | | |
| Load voltage range | 3-75VDC | 24-480VAC | 24-480VAC |
| Peak voltage | 75VDC | 800VAC | 800VAC |
| Leakage current when off | 12mA | 12mA | 12mA |
| Pressure drop when On | ≤0.2V | ≤1.5V | ≤1.5V |
| **GENERAL** | | | |
| **Max.load current** | | 10A,25A,40A,50A,60A,80A | |
| Leakage current when off | | 12mA | |
| Weight | | 181-245g | |
| Dielectric strength | | 2500V | |
| Operating temperature | | -20℃~80℃ | |
| Certification | | CE,ROHS | |

## DIMENSION




10A, 25A, 40A



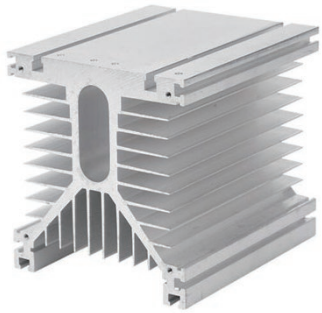

50A, 60A, 80A

## PRECAUTIONS

1. When the load is working, it is necessary to add enough radiators or take other effective heat dissipation measures.
2. The bottom of the relay needs to be coated with heat-dissipating silicone grease so that it can be tightly combined with the radiator.
3. The terminal and the load line must be tightly connected. The recommended installation torque for M4 screws is 0.98~1.37N m, and the installation torque for M3 screws is 0.58~0.98N m.
4. Random and enhanced solid state relays need to be customized, please consult our company for details.

# SSR Heat Sink

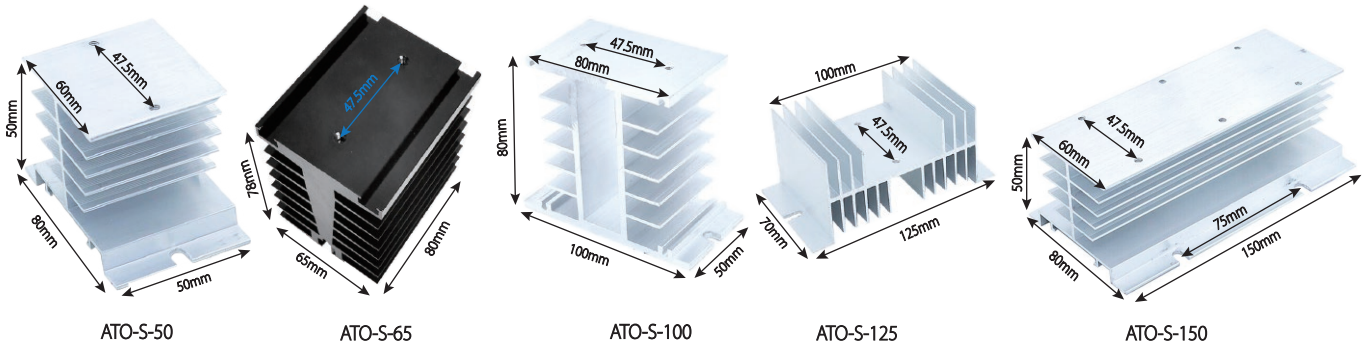
We have single-phase, three-phase, and industrial SSR heat dissipation modules covering all currents, which can perfectly play the performance of solid-state relays, thereby ensuring that the equipment operates without worry.



## SPECIFICATION

| Model | LxWxH(mm) | Application Range | Weight(g) |
|---|---|---|---|
| ATO-S-50 | 50*80*50 | For single phase 10-25A | 68 |
| ATO-S-65 | 65*80*78 | For single phase 10-120A | 402 |
| ATO-S-100 | 100*50*80 | For single phase 10-120A | 200 |
| ATO-S-125 | 125*50*70 | For single phase 10-60A | 175 |
| ATO-S-150 | 150* 80*50 | For 3PCS single phase 10-25A | 232.5 |

## DIMENSION

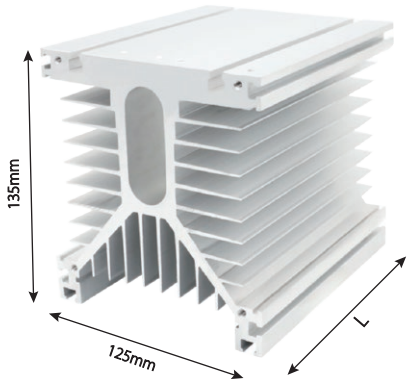



ATO-S-50 ATO-S-65 ATO-S-100 ATO-S-125 ATO-S-150

## SPECIFICATION

| TYPE | L*W*H(mm) | Application Range |
|---|---|---|
| ATO-L-150 | 150*125*135 | For 3-phase SSR, 1-phase SSR, industrial SSR with load less than 210A |
| ATO-L-200 | 200*125*135 | For 1-phase SSR and industrial SSR with total load of less than 300A |
| ATO-L-250 | 250*125*135 | For 1-phase SSR and industrial SSR with total load of less than 350A |
| ATO-L-300 | 300*125*135 | For 1-phase SSR and industrial SSR with total load of less than 400A |
| ATO-L-400 | 400*125*135 | For 1-phase SSR and industrial SSR with total load of less than 500A |
| Cooling fan optional voltage | | 24VDC,110VAC,220VAC |

## DIMENSION




# DPDT 3DPT 4PDT Electromagnetic Relays

## Feature:

* Thin, small size and light weight, which can reduce the installation space in PC board or electric cabinet.
* Low power consumption, can be operated by non-polarized magnets.
* Fluxtight structure, Can be soaked and cleaned, Socket optional.

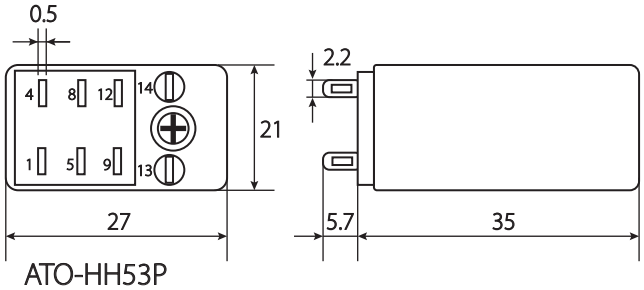
## SPECIFICATION

| Model | ATO-HH52P | ATO-HH53P | ATO-HH54P |
|---|---|---|---|
| Contact Arrangement | DPDT | 3PDT | 4PDT |
| Number of Pins | 8 | 11 | 14 |
| Contact Capacity | 5A/240VAC 28VDC | | 3A/240VAC 28VDC |
| Coil Power | DC≤0.9W, AC≤1.2VA | | |
| Coil Voltage | 12VDC,24VDC,24VAC,110VAC,220VAC | | |
| Dimension ( mm ) | 27*21*35 | | |

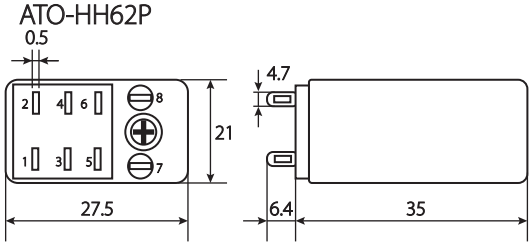
| Model | ATO-HH62P | ATO-HH63P | ATO-HH64P |
|---|---|---|---|
| Contact Arrangement | DPDT | 3PDT | 4PDT |
| Number of Pins | 8 | 11 | 14 |
| Contact Capacity | 10A/240VAC 28VDC | | |
| Coil Power | DC≤0.9W, AC≤1.2VA | | DC≤1.5W, AC≤3.0VA |
| Coil Voltage | 12VDC,24VDC,24VAC,110VAC,220VAC | | |
| Dimension ( mm ) | 27.5*21*35 | 27.5*31*35 | 27.5*41*35 |

## DIMENSION

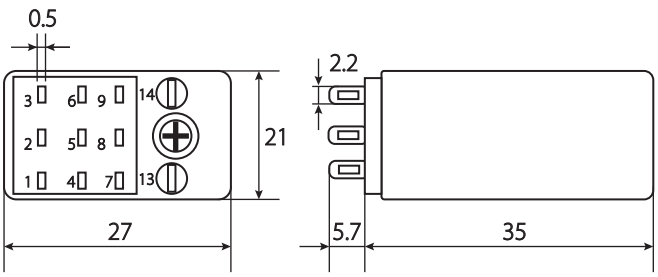
ATO-HH52P



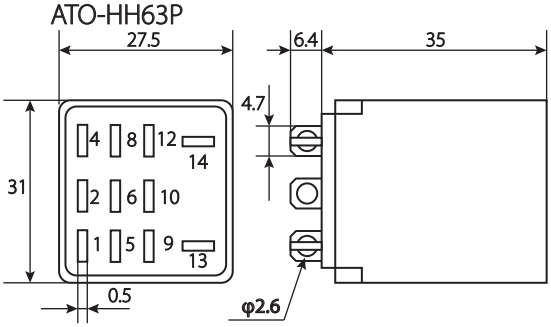

ATO-HH62P



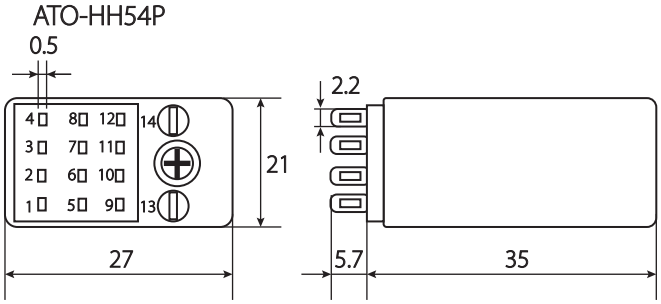

ATO-HH53P



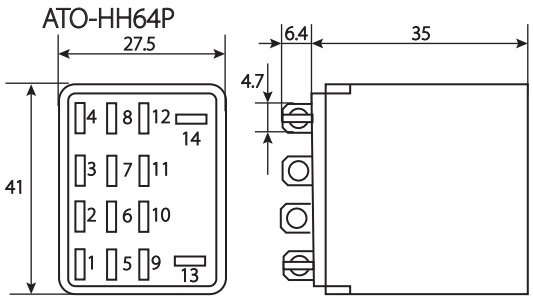

ATO-HH63P




ATO-HH54P




ATO-HH64P



# Electromagnetic Relay Module

## Feature:

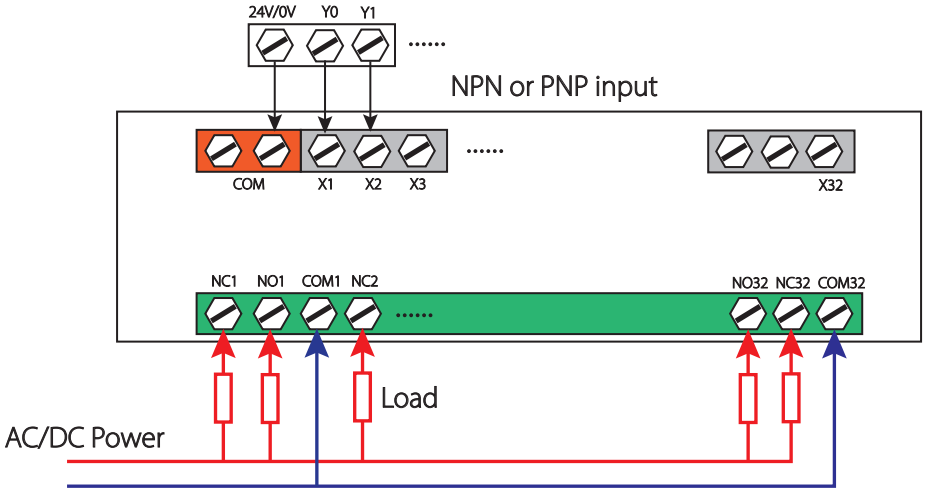
* Compatible with NPN and PNP input.
* Effectively expand PLC output capability and protect PLC output contacts.
* Clean and beautiful, easy to maintain, reliable performance.

## SPECIFICATION

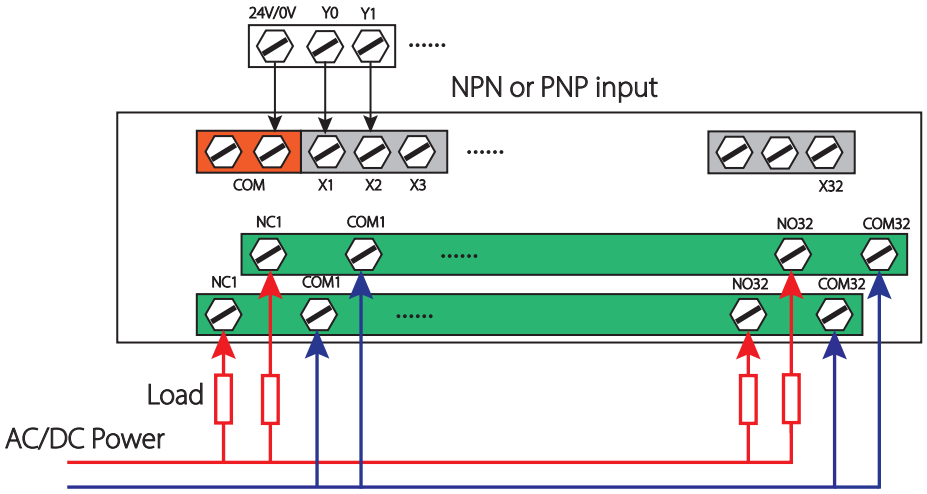
| Model | ATO-RM-24 | | |
|---|---|---|---|
| Number of Channels | 2,4,6,8,10,12,16,20,24,32 | | |
| Input Signal | NPN or PNP 24VDC | | |
| Input Drive Current | > 30mA | | |
| Relay Contact Form | 1NO+1NC/2NO+2NC, | | |
| Load Current | Resistive load: 10A 250VAC 30VDC / 5A 250VAC 30VDC<br>Inductive load: 7.5A 250VAC 5A 30VDC / 2A 250VAC 30VDC | | |
| Installation | 35mm DIN Rail | | |
| Channel/Size (L*W*H) | 2/40*87*65mm | 4/70*87*65mm | 6/107*87*65mm |
| | 8/134*87*65mm | 10/170*87*65mm | 12/200*87*65mm |
| | 16/264*87*65mm | 20/330*87*65mm | 24/393*87*65mm |
| | 32/543*87*65mm | | |

## WIRING

1NO +1NC




2NO +2NC



# SPDT DIN Rail Mount Slim Relay

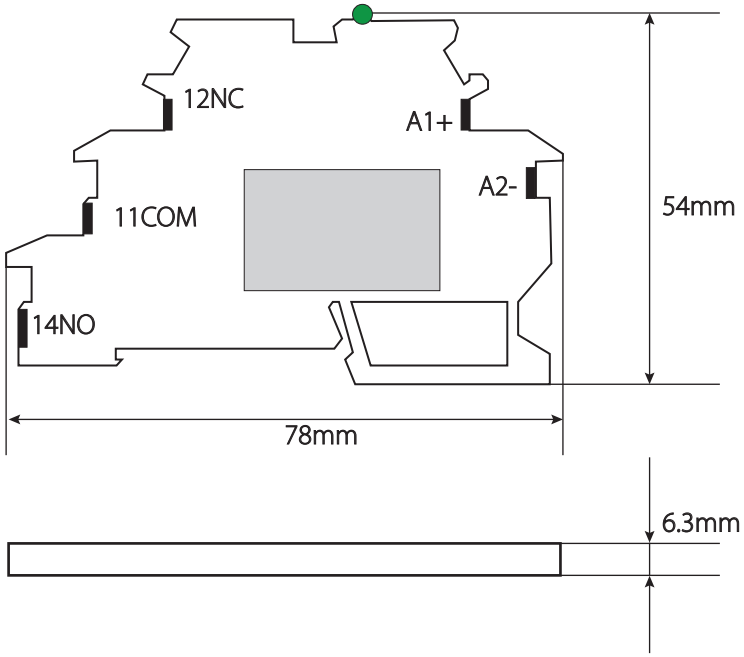
## Feature:

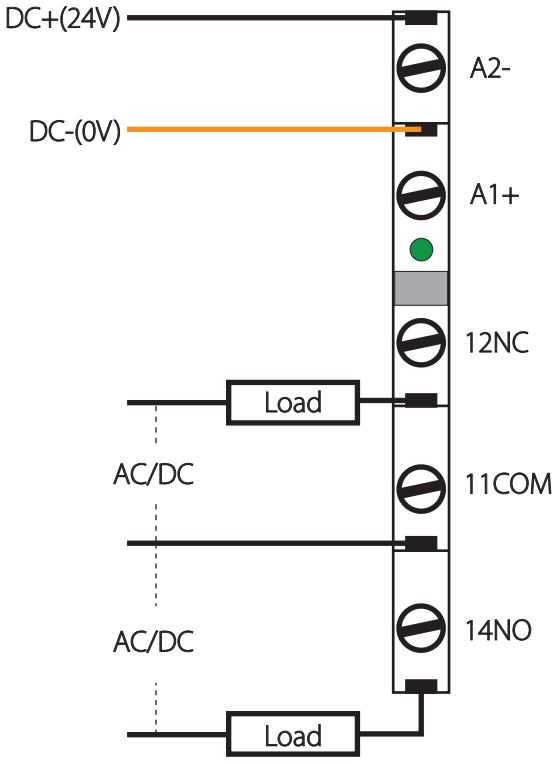
* LED working status indicator.
* 6.3mm thickness, saving 70% space than general relays.
* Optional solid state relay or electromagnetic relay type.
* Clean and beautiful, easy to maintain, reliable performance.

## SPECIFICATION

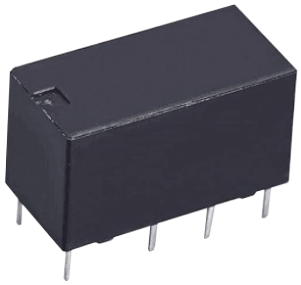
| Model | ATO-EMR-24VDC |
|---|---|
| Contact Form | SPDT (NO + NC) |
| Contact Material | Silver alloy |
| Contact Capacity (Resistive load) | 6A/250V AC 28VDC |
| Coil Power | DC 2.5W, AC 5VA |
| Coil Voltage | 24V DC |
| Insulation Resistance (MΩ) | 1000MΩ at 500V DC |
| Dimension (L*H) | 78×54mm |
| Weight | 30g |
| Ambient Temperature | -25℃~+55℃ |
| Number of Pins | 5 |
| Mount Type | 35mm DIN rail |

## DIMENSION & WIRING



# DPDT DC Signal Relay



## Feature:

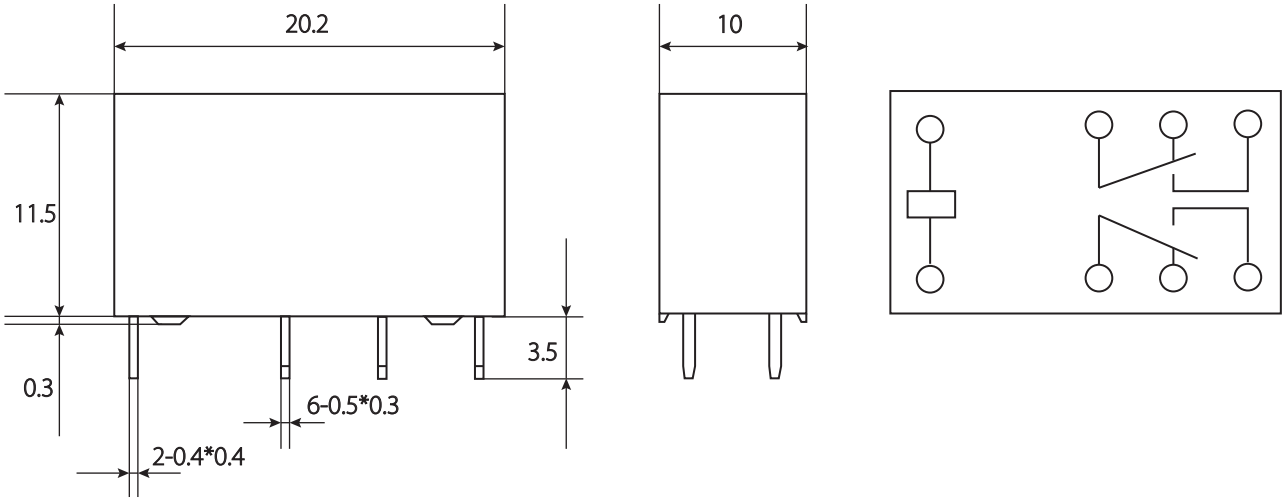
* 2A contact switching capability
* Standard dual in-line terminal (DIP package)
* Subminiature, gold-plated contacts
* Suitable for whole machine wave soldering and overall cleaning process

## SPECIFICATION

| Model | ATO-SR-FH32 |
|---|---|
| Contact Arrangement | DPDT |
| Contact Resistance | ≤100mΩ ( 6VDC 1A ) |
| Rated Load(Resistance) | 1A 125VAC / 2A 30VDC |
| Insulation Resistance | 1000MΩ ( 500VDC ) |
| Operate Time | ≤8ms |
| Release Time | ≤5ms |
| Mechanical | $1*10^7$ops |
| Temperature & Humidity | -40℃~85℃ · 5%~90% |
| Termination | PCB(DIP Encapsulation) |
| Unit Weight | Approx.5g |

| Rated Voltage | Operate Voltage(VDC) | Release Voltage(VDC) | Rated Current(±10%) | Coil Resistance | Rated Power | Max Voltage(VDC) |
|---|---|---|---|---|---|---|
| DC 3V | ≤2.25 | ≥0.15 | 66.7mA | 45Ω | 200mW | 3.9 |
| DC 5V | ≤3.75 | ≥0.25 | 40mA | 125Ω | | 6.5 |
| DC 6V | ≤4.50 | ≥0.30 | 33.3mA | 180Ω | | 7.8 |
| DC 9V | ≤6.75 | ≥0.45 | 22.2mA | 405Ω | | 11.7 |
| DC 12V | ≤9.00 | ≥0.60 | 16.7mA | 720Ω | | 15.6 |
| DC 15V | ≤11.25 | ≥0.75 | 13.3mA | 1128Ω | | 19.5 |
| DC 18V | ≤13.50 | ≥0.90 | 11.1mA | 1620Ω | | 23.4 |
| DC 24V | ≤18.00 | ≥1.20 | 8.3mA | 2880Ω | | 31.2 |

## DIMENSION & WIRING



# SPDT DC Signal Relay

## Feature:

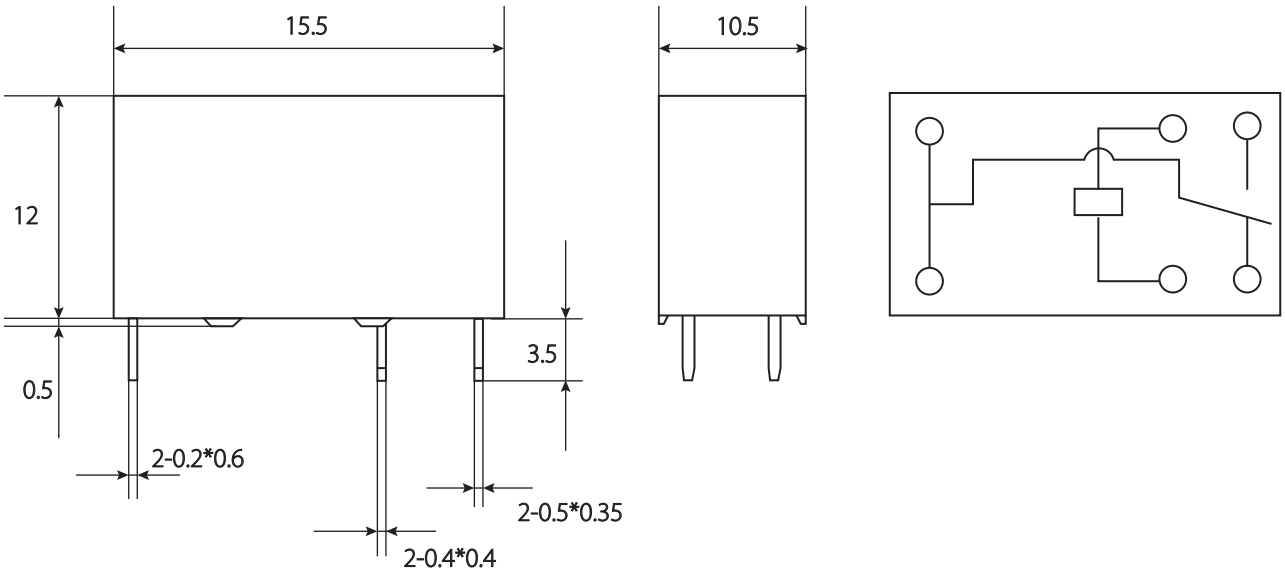
* 2A contact switching capability
* Standard dual in-line terminal (DIP package)
* Subminiature, gold-plated contacts
* Suitable for whole machine wave soldering and overall cleaning process

## SPECIFICATION

| Model | ATO-SR-FH8 |
|---|---|
| Contact Arrangement | SPDT |
| Contact Resistance | ≤100mΩ ( 6VDC 0.1A ) |
| Rated Load(Resistance) | 3A 250VAC |
| Insulation Resistance | 1000MΩ ( 500VDC ) |
| Operate Time | ≤10ms |
| Release Time | ≤5ms |
| Mechanical | 1*10⁷ ops |
| Temperature & Humidity | -40℃~85℃ · 5%~90% |
| Termination | PCB(DIP Encapsulation) |
| Unit Weight | Approx.5g |

| Rated Voltage | Operate Voltage(VDC) | Release Voltage(VDC) | Rated Current(±10%) | Coil Resistance | Rated Power | Max Voltage(VDC) |
|---|---|---|---|---|---|---|
| DC 3V | ≤2.25 | ≥0.15 | 66.7mA | 45Ω | 200mW | 3.9 |
| DC 5V | ≤3.75 | ≥0.25 | 40mA | 125Ω | | 6.5 |
| DC 6V | ≤4.50 | ≥0.30 | 33.3mA | 180Ω | | 7.8 |
| DC 9V | ≤6.75 | ≥0.45 | 22.2mA | 405Ω | | 11.7 |
| DC 12V | ≤9.00 | ≥0.60 | 16.7mA | 720Ω | | 15.6 |
| DC 24V | ≤18.00 | ≥1.20 | 8.3mA | 2880Ω | | 31.2 |

## DIMENSION & WIRING



# Analog & Digital Timer Relay

## Feature:

* Digital/analog timer, the setting range is 0.01~9999 s/m/h.
* DC, AC optional, 8-pin DIN rail installation.
* High-quality components are used inside, and the work is stable, safe and reliable.

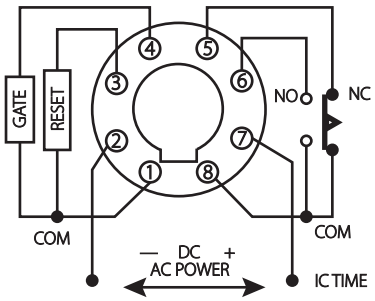

## SPECIFICATION

| Model | ATO-AH2-Y | ATO-TAH3-3 | ATO-TH3A |
|---|---|---|---|
| Supply Voltage | 12VDC, 24VDC, 110VAC, 220VAC | | |
| Output Mode | Mode 2: One group instantaneous and one group delay output<br>Mode 3: One group suspension delay output<br>Mode 4: Two groups sync delay output | | |
| Timing Range | Second: 6s, 12s, 30s, 60s<br>Minute: 6min, 12min, 30min, 60min<br>Hour: 1.2h, 6h, 12h, 30h, 60h | | |
| Setting Method | Knob with pointer / Analog | | |
| Contact Capacity | 3A 250V AC (Resistive Load) | | |
| Accessary | 8-pin Mounting Socket | | |

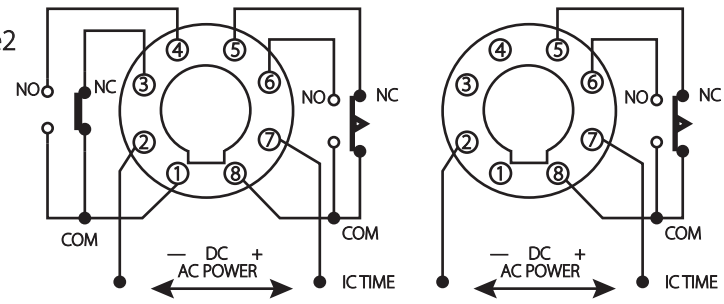
| Model | ATO-TH100 | ATO-TH200 |
|---|---|---|
| Supply Voltage | 85~265VAC,24VDC | |
| Output Mode | Mode 1: External connecting reset, one group pause delay output<br>Mode 2: One group instantaneous and one group delay output<br>Mode 3: One group suspension delay output | |
| Timing Range | 0.1~9999 s/m/h | 0.1~999 s/m/h |
| Setting Method | Digit | |
| Contact Capacity | 3A 250V AC (Resistive Load) | |
| Accessary | 8-pin Mounting Socket | |

## WIRING

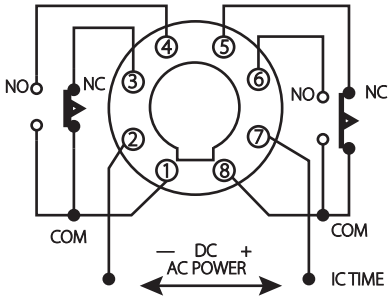
Mode1



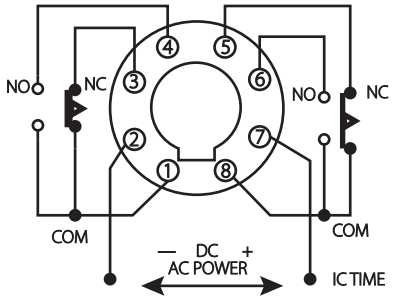

Mode2




Mode3




Mode4



# Programmable Timer Relay

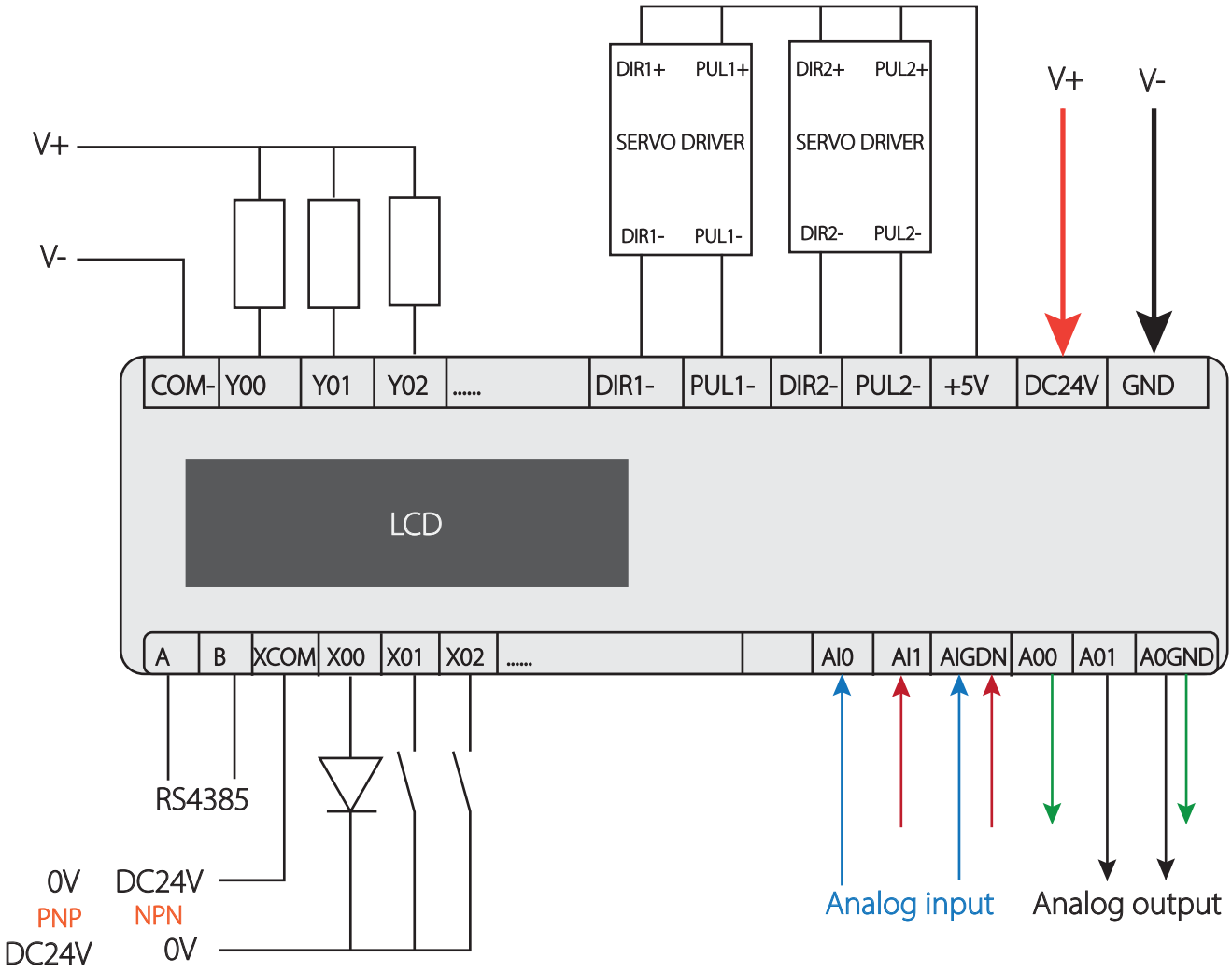
## Feature:

* Simple PLC logic program.
* Support NPN, PNP, and analog input.
* Support Modbus communication, switch value, pulse and analog output.

## SPECIFICATION

| Model | ATO-TIMER-PLC | |
|---|---|---|
| Type | Relay | Transistor |
| Number of Input | 8/12/16 PNP/NPN | |
| Number of output | 8/12/16 PNP/NPN | |
| Load capacity | 5A/240VAC 30VDC | 2A/2-24VDC |
| Input signal | > 2mA/DC 12-24V, NPN, PNP | |
| Analog input | 0~20mA, 4~20mA, 0~5V, 0~10V | |
| Analog output | 0~20mA, 4~20mA, 0~5V, 0~10V, RS485 Modbus-RTU | |
| Installation | 35mm DIN rail | |

## WIRING



# Thermal Overload Relay

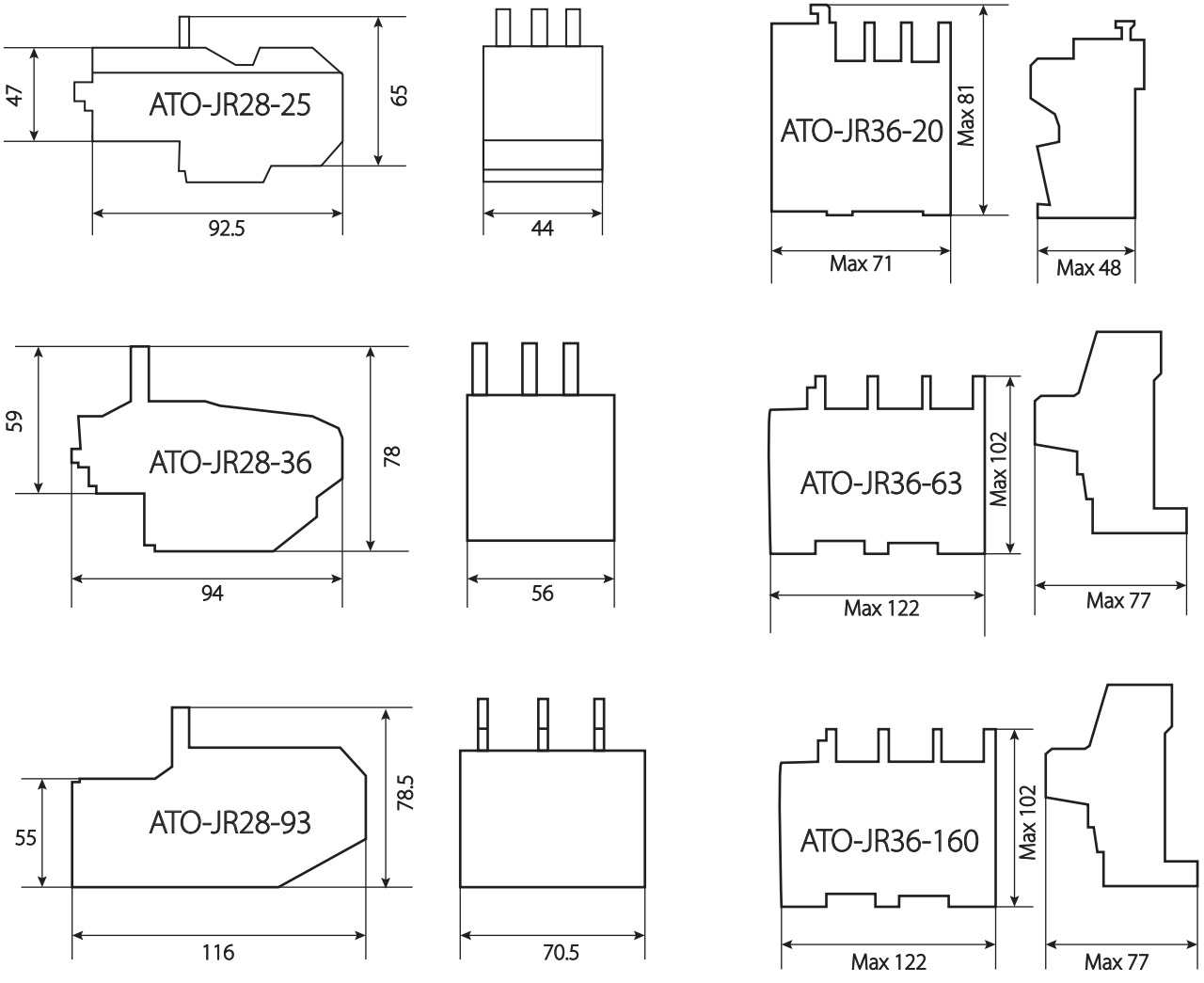
## Feature:

* Motor overload protection, phase loss protection.
* The setting current is adjustable.
* Contains silver contacts, flame retardant housing.

## SPECIFICATION

| Model | ATO-JR28-25 | ATO-JR28-36 | ATO-JR28-93 |
|---|---|---|---|
| Setting Range (A) | 0.1~25A | 17~40A | 37~93A |
| Frame Current (A) | 25A | 36A | 93A |
| Working Voltage (V) | 3-phase 220V~690V | | |
| Auxiliary contact | 1NO+1NC | | |
| **Model** | **ATO-JR36-20** | **ATO-JR36-63** | **ATO-JR36-160** |
| Setting Range (A) | 0.25~32A | 14~63A | 40~160A |
| Frame Current (A) | 20 | 63 | 160 |
| Working Voltage (V) | 3-phase 220V~690V | | |
| Auxiliary contact | 1NO+1NC | | |

## DIMENSION



# 3-Phase Monitoring Relay

## Feature:

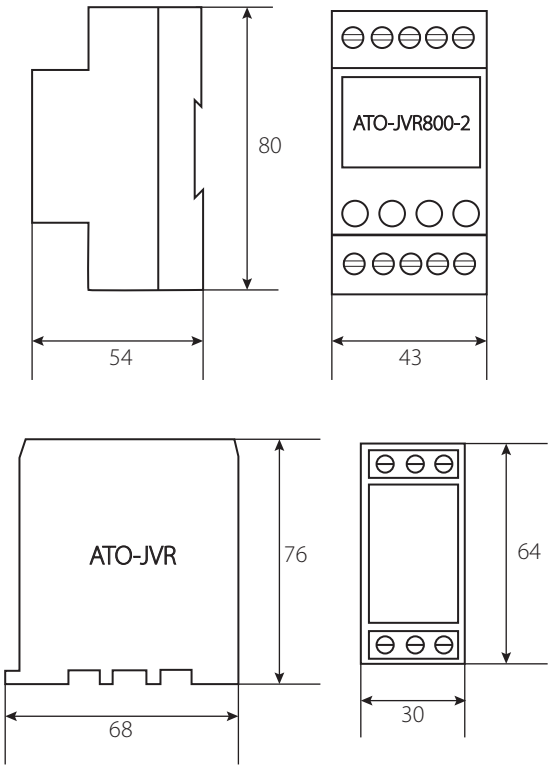
* LCD displays voltage value, fault status, and setting parameters.
* Real-time monitoring of three-phase overvoltage, undervoltage, voltage imbalance, wrong phase, and phase loss.
* Timing and counting function for operation and failure.

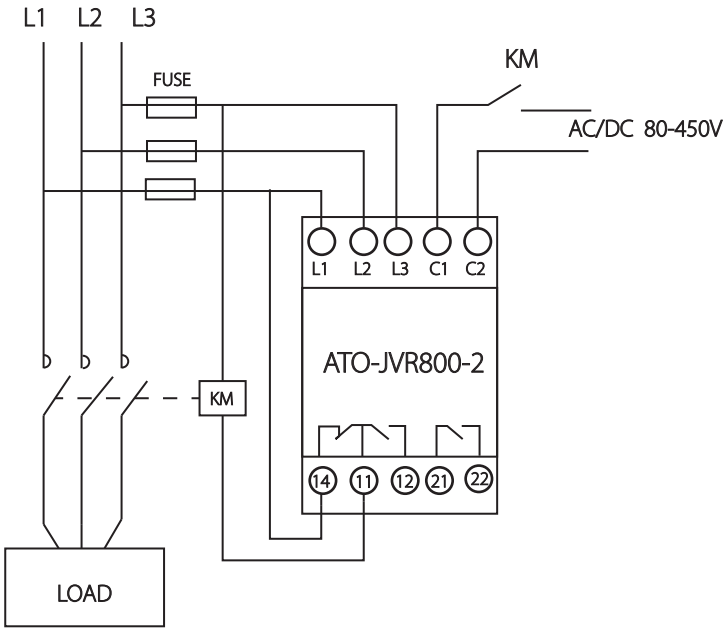
## SPECIFICATION

| Model | ATO-JVR |
|---|---|
| Measuring Circuit | 3-phase(L1,L2,L3) |
| Rated Voltage | 220V AC, 380V AC, 440V AC, 460V AC, 480V AC 50/60Hz |
| Setting Range | -15%~+15% · -10~+10% · -10~+12.5% · -12.5~+15% |
| Output Contacts | 1 C/O (SPDT or 1 Form C) |
| Monitoring Functions | Phase Sequence (Reversal), Phase Loss (Failure), Phase Unbalance Overvolatege, Undervoltage |

| Model | ATO-JVR800-2 |
|---|---|
| Measuring Circuit | 3-phase(L1,L2,L3) |
| Rated Voltage | 208-480V AC, 50/60Hz |
| Overvoltage Setting | 200-600V |
| Undervoltage Setting | 150-500V |
| Delay Time for Reset | 0.1-999s |
| Output Contacts | 1 CO + 1 NC |
| Monitoring Functions | Phase Sequence (Reversal), Phase Loss (Failure), Phase Unbalance Overvolatege, Undervoltage, Timer & Counter |

## DIMENSION & WIRING



# 1-Phase & DC Monitoring Relay

## Feature:

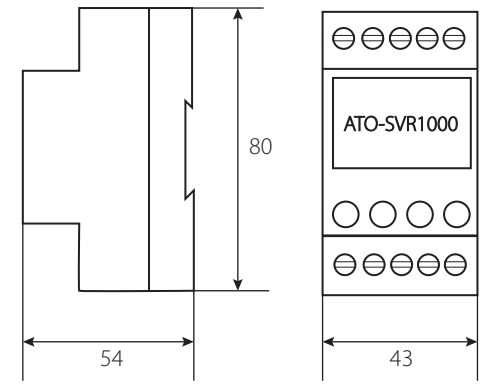
* LCD displays voltage value, fault status, and setting parameters.
* Real-time monitoring of three-phase overvoltage, undervoltage, voltage imbalance, wrong phase, and phase loss.
* Timing and counting function for operation and failure.

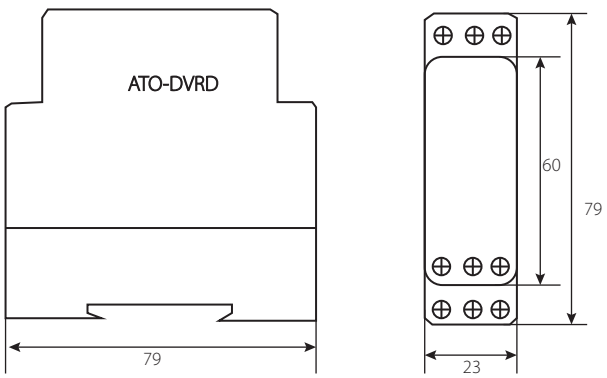
## SPECIFICATION

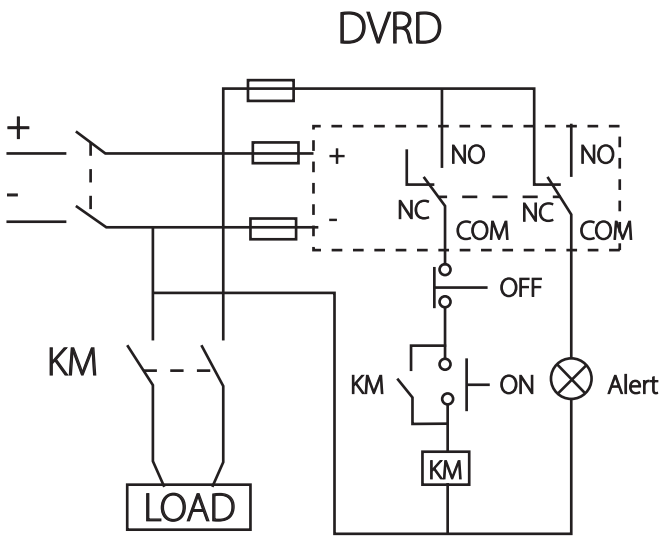
| Model | ATO-SVR1000 | | |
|---|---|---|---|
| Measuring Circuit | AC/DC circuit (A1+, A2-) | | |
| Rated Voltage | DC 12V | AC/DC 24~48V 50/60Hz | AC/DC 110~240V 50/60Hz |
| Overvoltage Setting | DC 9~18V | AC/DC 20~80V | AC/DC 50~300V |
| Undervoltage Setting | DC 9~18V | AC/DC 20~80V | AC/DC 50~300V |
| Delay Time for Reset | 0.1-999s | | |
| Output Contacts | 1 CO + 1 NC | | |
| Monitoring Functions | Overvolatege, Undervoltage, Timer & Counter | | |

| Model | ATO-DVRD | | | |
|---|---|---|---|---|
| Measuring Circuit | DC circuit | | | |
| Rated Voltage | DC 12V | DC24V | DC 36V | DC 48V |
| Overvoltage Setting | 13~17V | 26~34V | 39~51V | 52~68V |
| Undervoltage Setting | 10~14V | 20~28V | 30~42V | 40~56V |
| Trip Delay Time | 0.1~15s | | | |
| Output Contacts | 2C/O | | | |
| Monitoring Functions | Overvolatege, Undervoltage | | | |

## DIMENSION & WIRING



# Contact us

Email: sale@atorelays.com
Tel: +86 773-363-7977
Address: BLDG A, MiXc Xiufeng, Guilin China


Our long-term commitment to product technology R&D and more areas of development in China. Meanwhile, ATO as a manufacturer also can provide a series of technical solutions about flow meter.